Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Fluid Mechanics

Graded Unit Reference Number: GA33PHY08

Ungraded Unit Reference Number: UA33PHY08

Module: Physics

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand the properties of fluids and the principles of fluid statics	1.1 Define fluid properties of pressure, density and viscosity and solve problems involving these
	1.2 Distinguish between ideal fluids and real fluids
2. Understand static pressure in fluids and its applications	2.1 Explain absolute pressure and gauge pressure and calculate how atmospheric pressure changes with altitude
	2.2 Solve problems involving static pressure
	2.3 Define Pascal's principle and apply it to engineering examples
	2.4 Define Archimedes' principle and apply it to solve problems
3. Understand the concepts involved in fluid flow	3.1 Define the terms incompressible flow, compressible flow and flow rate
	3.2 Explain and apply the principle of fluid continuity
	3.3 Define velocity of flow, pressure and friction loss in terms of fluid head and solve problems involving these

4.	Understand the dynamics of fluids and conservation of energy for a steady flow	4.1	Derive Bernoulli's equation of motion for a steady incompressible flow
		4.2	Apply Bernoulli's equation to the flow of liquids in pipes